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Why Texas Feels Less Subprime Stress than U.S.

By Anil Kumar

Differences in economic factors and mortgage characteristics give the state a lower delinquency rate.

Subprime loans and other high-risk mortgages grew rapidly for several years before falling U.S. housing prices and steep increases in defaults and foreclosures touched off the global economy's most severe financial crisis in decades. Except for a brief period, Texas homebuyers relied more heavily than borrowers nationwide on subprime mortgages. Yet, troubles with these loans aren't as severe in Texas.

According to the Mortgage Bankers Association, the state matched the nation in 2005 with 8 percent of its subprime mortgages more than 60 days past due or in foreclosure. By the second quarter of 2008, the nation's rate had risen to 20 percent, well above Texas' 14 percent.

Broad economic factors explain part of Texas' better subprime loan performance.[1] Texas has grown faster than most other states in recent years, and housing prices have held steady. Worst hit in the subprime fallout have been California, Florida, Nevada and Arizona, states in which housing prices have plunged after soaring earlier in this decade.

Subprime mortgage characteristics may also shed light on the gaps in states' default rates. On average, Texas subprime borrowers have more equity in their homes than those in other states, providing larger cushions against default.

The state relies less on exotic mortgages, such as interest-only or negative-amortization loans. Texans with subprime loans are also less likely to take out adjustable-rate mortgages (ARMs), which are subject to sharply higher monthly payments when interest rates reset.

Due to the state's strong predatory lending laws and restrictions on mortgage equity withdrawals, a smaller share of Texas' subprime loans involve cash-out refinancing, which reduces homeowner equity and makes default more likely when mortgage payments become unaffordable.

Ascent and Decline

Homebuyers with good credit ratings and well-documented sources of income usually finance through what the mortgage industry calls conventional loans, offering the lowest interest rates fixed over 15 or 30 years. Those who can't qualify for conventional financing often turn to two types of higher-interest loans—subprime mortgages for buyers with low credit scores and Alt-A mortgages for borrowers with inadequate income documentation.

As the housing boom gained momentum earlier in this decade, mortgage originators relied more on new types of loans. Such products as interest-only and negative-amortization loans allowed lenders to extend credit to more households and investors with low incomes and poor credit histories.[2] Subprime loans with ARMs often carried enticingly low teaser rates.

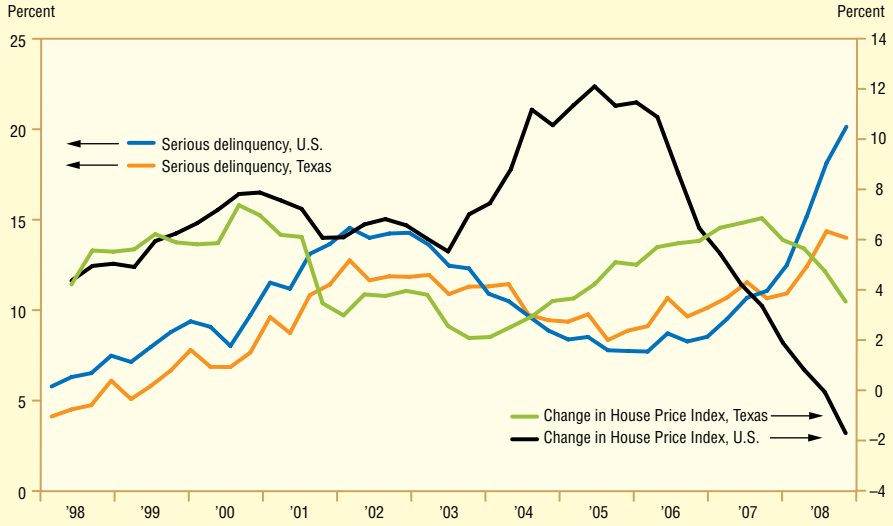
For both Texas and the U.S., subprime mortgage growth took off in 2003 (*Chart 1*). For the state, the category rose from 6 percent of home loans in mid-2003 to 11 percent by year's end. The share peaked at 18 percent in mid-2007 before declining to 16 percent in August. Both before and after the 2003 surge, the U.S. generally trailed Texas, with the gap widening somewhat in the past two years.

Two key reasons for Texas' relatively high subprime use are income and credit scores. The state's median per capita household income was $47,548 in 2007, compared with $50,740 for the U.S.[3] About 48 percent of subprime borrowers in Texas had FICO credit scores of 600 or less, compared with 39 percent for the nation.

While Texas and the U.S. had parallel growth paths, the state's share of U.S. subprime mortgages retreated from 7 percent in 2001 to 5 percent in 2004. Higher rates of expected housing price appreciation in California, Florida and elsewhere may have fueled faster growth of subprime mortgages in those states. After 2005, when the housing

In Texas, prices have been relatively stable, and the state's subprime delinquencies increased at a much slower rate.

Chart 2
Subprime Delinquency Rises More Slowly in Texas



NOTE: Serious delinquencies are mortgages more than 60 days past due or in foreclosure.
SOURCES: Mortgage Bankers Association; Federal Housing Finance Agency; Haver Analytics; author's calculations.

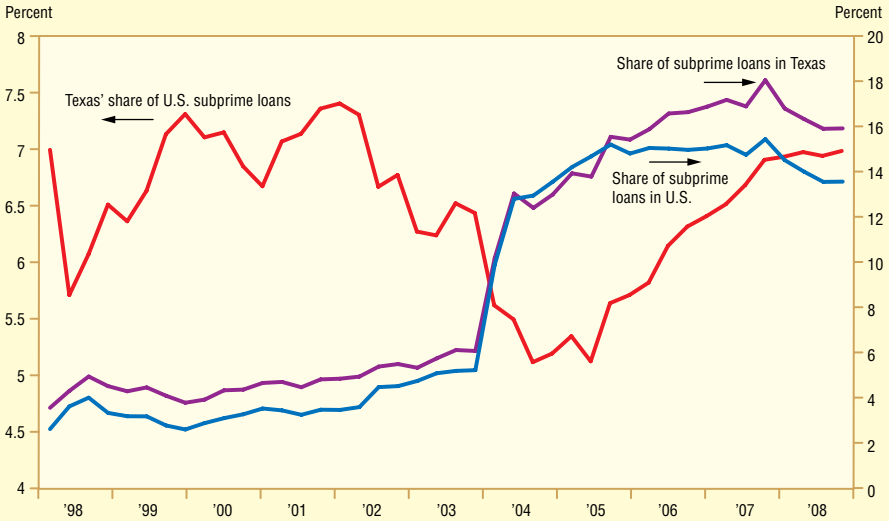
market started cooling elsewhere, Texas' housing prices held steady and its share of subprime mortgages crept back up to about 7 percent.

When the housing bubble burst in parts of the country, an increasing number of borrowers found it hard to stay current on their mortgages, leading to a rise in subprime delinquencies and a meltdown in the housing market. The residential real estate troubles spread to financial markets and the overall economy because most loans were packaged into mortgage-backed securities, tying their values to homeowners' ability to make monthly payments.

According to the Mortgage Bankers Association, seriously delinquent mortgages began rising nationally in the second half of 2005, when housing prices peaked on their way to a steep slide (*Chart 2*). In Texas, prices have been relatively stable, and the state's subprime delinquencies increased at a much slower rate.

Another measure of mortgage troubles tells the same story. First American LoanPerformance (FALP) data from the New York Fed show that about 7 percent of Texas subprime loans were 90 days past due in August 2008, compared with 10 percent for the nation. Subprime foreclosures in Texas were 4 percent, significantly lower than the nation's 11 percent.[4]

Chart 1
Texas' Share of Subprime Mortgages Fluctuates



SOURCES: Mortgage Bankers Association; Haver Analytics; author's calculations.

How Texas Differs

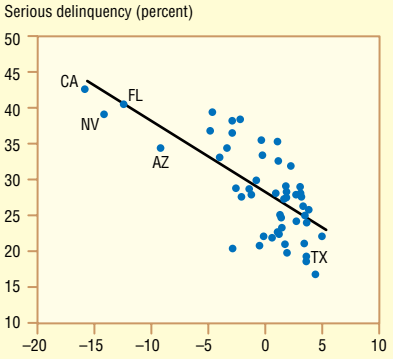
Housing prices and economic conditions provide a good start in explaining Texas' milder subprime troubles.

Rapidly falling housing prices erode equity and reduce homeowners' incentives to avoid foreclosure, particularly for those who find their mortgage balances exceed their home's value. These considerations are less important in Texas, where housing prices increased only modestly and haven't fallen much.

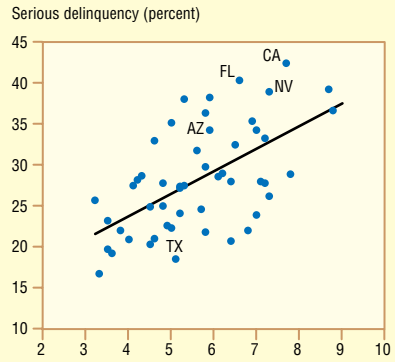
A weak economy can trigger defaults through falling incomes and job losses.

Chart 3
Housing Prices, Unemployment Affect Subprime Delinquency
(2007:Q2 to 2008:Q2)

A. Housing Price Appreciation (percent)



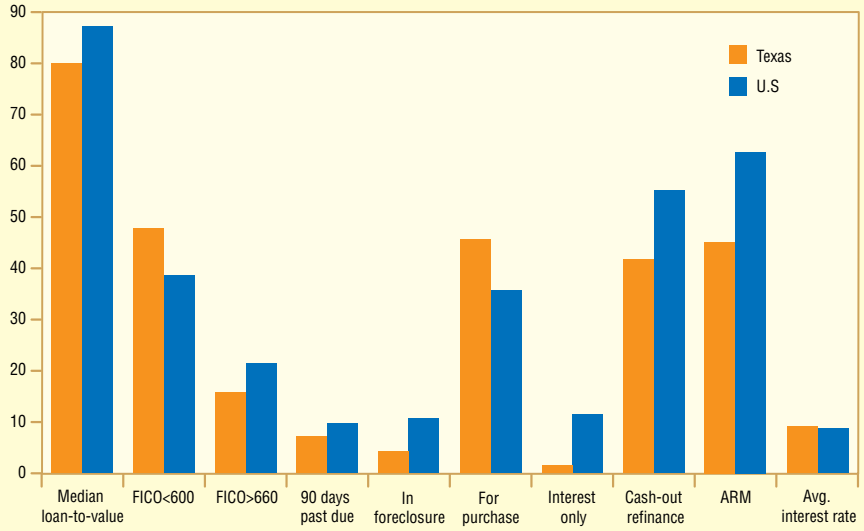
B. Unemployment Rate (percent)



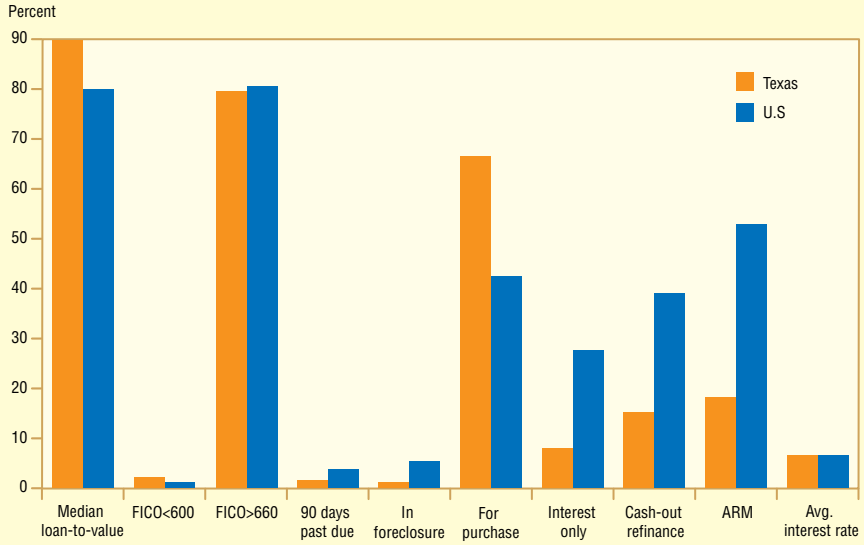
SOURCE: First American LoanPerformance data from Federal Reserve Bank of New York, August 2008.

Chart 4
Texas Differs from U.S. in Mortgage Characteristics

A. Subprime Loans



B. Alt-A Loans



SOURCE: First American LoanPerformance data from Federal Reserve Bank of New York, August 2008.

High subprime default states had relatively higher unemployment rates. Texas had lower delinquency and unemployment rates.

Overall, state data indicate a strong negative correlation between August 2008 delinquency rates and housing-price fluctuations from second quarter 2007 to second quarter 2008 (*Chart 3A*). At the same time, the data show a significant positive relationship between delinquencies and state unemployment rates (*Chart 3B*).

Texas' delinquency rate was less than would be predicted by its housing price appreciation and unemployment rate, suggesting that other factors likely are important in explaining differences in subprime delinquency across states. One factor might be subprime mortgage characteristics. FALP data show Texas subprime mortgages are different in many respects from U.S. loans of this type (*Chart 4A*).[5]

While lower credit scores increase the riskiness of Texas subprime mortgages, several other factors make the state's subprime mortgages less likely to run into trouble.

Texas subprime borrowers have more equity in their homes, with a median loan-to-value (LTV) ratio of 80 percent, lower than the nation's 87 percent ratio.

At just 1 percent, Texas' use of interest-only loans as of August 2008 was less than the nation's 11 percent. Since borrowers delay payment of only the principal on these loans for a specified period, the initial interest is higher than for traditional mortgages. After the interest-only period expires, mortgage payments can rise sharply.

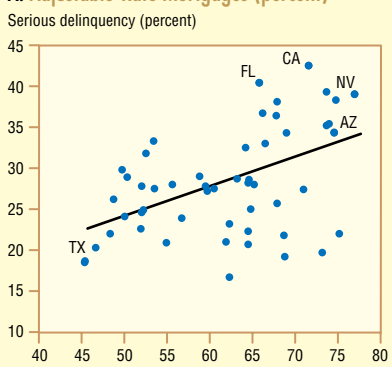
In addition, the state has relied less on negative-amortization loans, another category particularly vulnerable to default.

Forty-five precent of Texas borrowers had ARMs, compared with 65 percent for the U.S. The state also has a much smaller share of subprime ARMs scheduled to reset in the next year. Many subprime borrowers default because interest rates on ARM loans reset to higher rates and increase payments.[6] As a result, ARMs are more likely to default than fixed-rate loans.

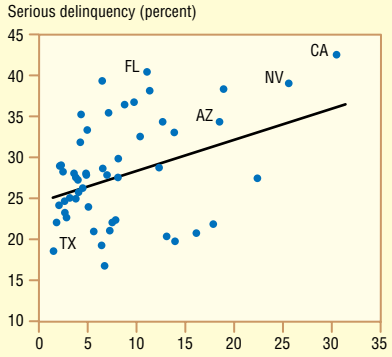
Texas has a lower incidence of subprime loans for cash-out refinancing. Forty-two percent of Texas subprime borrowers used cash-out refinancing, compared with 55 percent for the nation.

Chart 5
Mortgage Characteristics Explain States' Subprime Delinquency

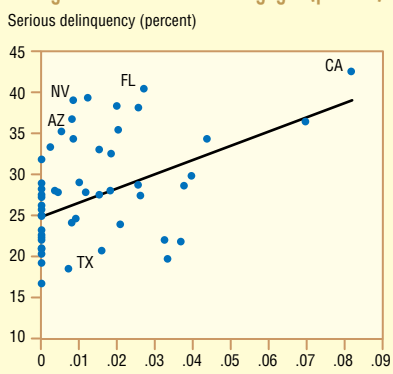
A. Adjustable-Rate Mortgages (percent)



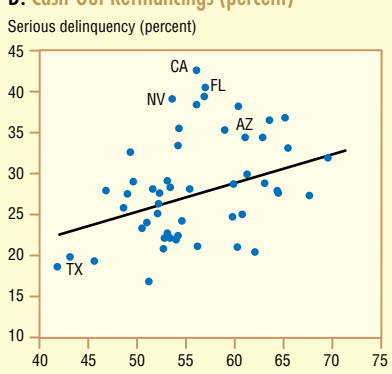
B. Interest-Only Mortgages (percent)



C. Negative-Amortization Mortgages (percent)



D. Cash-Out Refinancings (percent)



SOURCE: First American LoanPerformance data from Federal Reserve Bank of New York, August 2008.

A lower incidence of this type of loan is hardly surprising in a state with strong predatory lending laws.[7] In Texas, a borrower's home equity can't be less than 20 percent of the home's value in order to qualify for an equity loan or line of credit.

What about Alt-A loans?[8] According to FALP data, these mortgages financed 1 percent of the state's total housing units as of August 2008, compared with 2 percent for the nation.

Texas' Alt-A borrowers differ from the nation's in many of the same ways as their subprime counterparts. They have higher LTV ratios and lower incidences of interest-only mortgages, negative-amortization loans, ARMs and cash-out refinancings (*Chart 4B*). Unlike subprime mortgages, a larger share of Alt-A ARMs are scheduled to reset over the next two years in Texas than in the nation.

Some of these key subprime characteristics are strongly correlated with delinquency rates among states. Positively sloped regression lines indicate that default rates tend to rise with the incidence of mortgages with ARMs, interest-only payments, negative amortization and cash-out refinancing (*Chart 5*).

Although housing prices, unemployment rates and subprime mortgage attributes are individually correlated with default rates, many of these factors may interact with one another, making relationships more complex.

For example, subprime borrowers may have resorted to ARMs to purchase unaffordable homes. For many of them, incomes couldn't keep pace with rising mortgage payments as interest rates reset. When housing prices were rising, borrowers could refinance their way out of default. However, housing price growth decelerated in parts of the country with high incidences of subprime mortgages, compromising homeowners' ability to keep their homes.

A model for subprime delinquencies that accounts for many factors simultaneously explains nearly 75 percent of the overall variation in subprime delinquencies. Four factors stand out: the unemployment rate, the percentage of cash-out refinancings, the percentage of ARMs and housing price appreciation (*Table 1*). Other factors aren't statistically significant.

Most important, housing price appreciation and the unemployment rate each have an economically large impact on delinquency. A 1 percentage point increase in price appreciation reduces delinquencies 0.82 percentage point. If the unemployment rate rises 1 percentage point, troubled loans go up more than 1 percentage point. A percentage-point increase in cash-out refinancings pushes delinquencies 0.35 percentage point higher, and the same increase in ARMs sends delinquencies 0.15 percentage point higher.

As the model predicts, Texas has a lower delinquency rate because its housing prices appreciated modestly. In addition, the economy has been stronger in Texas than in most states and its unemployment rate has been lower. The state also has a lower incidence of ARMs and mortgages for cash-out refinancing.

State data on subprime mortgage delinquencies suggest that housing prices and local economic factors are still the primary drivers of subprime default rates. Even so, mortgage characteristics also matter—from the incidence of ARMs to the purpose for which the loan was taken out. In general, cash-out refinancing loans are more prone to delinquency than loans for outright purchases.

Recent tightening of credit standards in the mortgage market has put a lid on the growth of subprime and exotic mortgages. Nevertheless, a sharply deteriorating economy, weak home sales and a continued downward trend in housing prices suggest

(*Continued on back page*)

Table 1
Determinants of Subprime Delinquency

Characteristic	Coefficient
Percent lagged unemployment rate	1.43**
Percent cash-out refinance loans	.35**
Percent ARM loans	.15*
Percent lagged housing price appreciation	– .82**
Whether negative amortization in state	1.34
Percent average loan-to-value	.21
Percent interest-only loans	– .05
Average FICO score	– .10

*Significant at 10 percent.
**Significant at 5 percent.

SOURCES: First American LoanPerformance data from Federal Reserve Bank of New York, August 2008; author's calculations.

Why Texas Feels Less Subprime Stress than U.S.

(*Continued from page 6*)

that delinquencies and foreclosures will continue at a high level.

The Texas housing market has shown substantial weakening in 2008, even though the state's housing prices have held up better than the nation's.[9] The financial turmoil and credit crisis, coupled with low energy prices, have made it more likely that the region will follow the nation in an economic downturn. This suggests that Texas will inch closer to the U.S in subprime delinquency.

Kumar is a senior economist in the Research Department of the Federal Reserve Bank of Dallas.

Notes

The author thanks Keith Phillips and Wenhua Di for comments and helpful discussion.

[1] See "Mortgage Delinquencies and Foreclosures," speech by Ben S. Bernanke, chairman of the Board of Governors of the Federal Reserve System, at Columbia Business School's 32nd Annual Dinner, New York, May 5, 2008.

[2] Interest-only mortgages are adjustable-rate mortgages with the option of paying only the interest for a specified period rather than interest plus part of the principal, as in traditional mortgages. Mortgage payments would typically increase sharply on such loans after the specified period because borrowers would have to start paying a principal amortized over a much shorter period than usual. Negative-amortization loans go a step further and allow borrowers to pay interest on an amount lower than the principal for a specified period. The remaining interest is added to the principal amount and becomes due after the specified period. With negative-amortization loans, mortgage payments in later years rise even more sharply than with interest-only loans. See "Making Sense of the U.S. Housing Slowdown," by John V. Duca, Federal Reserve Bank of Dallas *Economic Letter*, vol. 1, no. 11, 2006.

[3] Data are from the census bureau's American Community Survey.

[4] For a more detailed analysis of differences between national and state trends, see "Residential Foreclosures in Texas Depart from National Trends," by Wenhua Di, Federal Reserve Bank of Dallas *e-Perspectives*, vol. 8, no. 2, 2008.

[5] It's worth noting that FALP data on subprime mortgages cover about 47 percent of all active owner-occupied subprime loans in the U.S. Although FALP is one of the most comprehensive data sources and has been used in numerous studies on subprime mortgage conditions, it's by no means perfect. In using the data for state-level studies, it must be further assumed that the data are broadly representative of state-level subprime mortgages. For a more detailed description of the data, see "Technical Appendix: Nonprime Mortgage Conditions in the United States," Federal Reserve Bank of New York, www.newyorkfed.org/regional/techappendix_spreadsheets.html.

[6] For a different point of view on resets, see "Subprime Facts: What (We Think) We Know About the Subprime Crisis and What We Don't," by Christopher L. Foote, Kristopher Gerardi, Lorenz Goette and Paul S. Willen, Federal Reserve Bank of Boston Public Policy Paper no. 08–2, 2008.

[7] For a more detailed discussion of such restrictions in Texas, see "Will Texas Voters See Equity in Home Equity Lending?" by Edward C. Skelton, Federal Reserve Bank of Dallas *Financial Industry Issues*, Third Quarter, 1997.

[8] FALP data cover about 90 percent of all active owner-occupied securitized Alt-A loans in the U.S.

[9] For a Texas housing sector outlook, see "Hot Housing Market Catching Cold in Texas," by D'Ann Petersen, Federal Reserve Bank of Dallas *Southwest Economy*, no. 1, 2008, pp. 11–14.

Federal Reserve Bank of Dallas
P.O. Box 655906
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